National Institute of Environmental Health Sciences

Cost of dengue cases in eight countries in the Americas and Asia: A prospective study

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Abstract:

Despite the growing worldwide burden of dengue fever, the global economic impact of dengue illness is poorly documented. Using a common protocol, we present the first multicountry estimates of the direct and indirect costs of dengue cases in eight American and Asian countries. We conducted prospective studies of the cost of dengue in five countries in the Americas (Brazil, El Salvador, Guatemala, Panama, and Venezuela) and three countries in Asia (Cambodia, Malaysia, and Thailand). All studies followed the same core protocol with interviews and medical record reviews. The study populations were patients treated in ambulatory and hospital settings with a clinical diagnosis of dengue. Most studies were performed in 2005. Costs are in 2005 international dollars (I$). We studied 1,695 patients (48% pediatric and 52% adult); none died. The average illness lasted 11.9 days for ambulatory patients and 11.0 days for hospitalized patients. Among hospitalized patients, students lost 5.6 days of school, whereas those working lost 9.9 work days per average dengue episode. Overall mean costs were I$514 and I$1,394 for an ambulatory and hospitalized case, respectively. With an annual average of 574,000 cases reported, the aggregate annual economic cost of dengue for the eight study countries is at least I$587 million. Preliminary adjustment for under-reporting could raise this total to $1.8 billion, and incorporating costs of dengue surveillance and vector control would raise the amount further. Dengue imposes substantial costs on both the health sector and the overall economy.

Source: http://www.ajtmh.org/content/80/5/846.long http://www.ncbi.nlm.nih.gov/pubmed/19407136

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia, Central/South America, Non-U.S. North America

Asian Region/Country: Other Asian Country

Other Asian Country: Cambodia; Malaysia; Thailand

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Dengue

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Cost/Economic

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Short-Term (

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content